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AUTHOR McCracken, J. David, Comp.
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ABSTRACT

The compilation of research and development activities in secondary and post-secondary agricultural education includes abstracts of 54 studies completed during the period July 1, 1974 to June 30, 1975 in 17 States. Nineteen of the completed studies represent staff research, 11 represent doctoral theses, and 24 represent masters theses. They are arranged alphabetically by State and alphabetically by author within States. A brief summary of the purpose, method, and findings is given for each study. A subject index, utilizing ERIC descriptors, is provided. Studies reported as in progress during 1975-76 are also compiled, arranged alphabetically by State, with authors and titles listed. In progress were 33 staff studies, 30 doctoral dissertations, and 11 masters theses. A chart showing where to find previous summaries of studies in agricultural education on microfiche in the ERIC system is included. (Author)

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**Summaries Of Research
And Development Activities In
Agricultural Education**

**United States Of
America**

**Department Of Agricultural Education
The Ohio State University, Columbus**

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SUMMARIES OF RESEARCH
AND DEVELOPMENT ACTIVITIES IN
AGRICULTURAL EDUCATION
1974 - 1975

UNITED STATES OF AMERICA

COMPILED BY

J. DAVID MCCrackEN

DEPARTMENT OF AGRICULTURAL EDUCATION
THE OHIO STATE UNIVERSITY
COLUMBUS

1975

FOREWARD

THIS DOCUMENT REPRESENTS THE FIRST ANNUAL NATIONAL COMPILATION OF THIS MATERIAL. STATES NOT INCLUDED IN THIS COMPILATION ARE ENCOURAGED TO SUBMIT INFORMATION FOR SUCCEEDING ISSUES.

THIS COMPILATION OF RESEARCH AND DEVELOPMENT ACTIVITIES IN AGRICULTURAL EDUCATION INCLUDES ABSTRACTS OF 54 STUDIES COMPLETED DURING THE PERIOD JULY 1, 1974 TO JUNE 30, 1975. NINETEEN OF THE COMPLETED STUDIES REPRESENT STAFF RESEARCH, 11 REPRESENT DOCTORAL THESES AND 24 REPRESENT MASTERS THESES. THEY ARE ARRANGED ALPHABETICALLY BY STATE AND ALPHABETICALLY BY AUTHOR WITHIN STATES. A SUBJECT INDEX, UTILIZING ERIC DESCRIPTORS, WAS PREPARED.

STUDIES REPORTED AS IN PROGRESS DURING 1975-76 WERE ALSO COMPILED. THEY ARE ARRANGED ALPHABETICALLY BY STATE. IN PROGRESS WERE 33 STAFF STUDIES, 30 DOCTORAL DISSERTATIONS, AND 11 MASTERS THESES.

THE COMPILATION OF ABSTRACTS OF RESEARCH AND DEVELOPMENT ACTIVITIES IN AGRICULTURAL EDUCATION IS AN ACTIVITY OF THE RESEARCH COMMITTEE OF THE AGRICULTURAL EDUCATION DIVISION OF THE AMERICAN VOCATIONAL ASSOCIATION.

J. DAVID MCCrackEN

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SUMMARIES OF STUDIES, 1974-75

COLORADO

GOBBO, Lee R. "Competencies Needed for Successful Employment in Beef Production." Master of Education Report, 1975, Colorado State University, Fort Collins.

Purpose. The purpose of this study was to determine the competencies needed for successful employment in the occupational clusters comprising the area of beef production.

Method. The data were obtained by using both interviews and mailed responses from 29 beef breeders and 20 beef feeders. The 29 beef breeders rated competencies identified in seven occupational clusters in beef breeding.

Findings. The study resulted in a ranking of competencies needed for successful employment in 14 occupational clusters in the employment area of beef production. In the seven occupational clusters comprising the beef breeding area, the number of competencies which were rated as being "important" to "essential" are as follows: cattle ranch foreman, 46 competencies; assistant cattle ranch foreman, 23 competencies; cattle ranch and farm hand, 48 competencies; cowpuncher, 52 competencies; ranch laborer, 22 competencies; artificial inseminator, 19 competencies; and veterinary assistant, 35 competencies.

In the seven occupational clusters comprising the beef feeding area, the number of competencies which were ranked as being "important" to "essential" are as follows: feed lot foreman, 36 competencies; assistant feed lot foreman, 26 competencies; feed lot hand, 37 competencies; feed kit laborer, 20 competencies; cattle buyer, 27 competencies; feed truck driver, 19 competencies; and veterinary assistant, 33 competencies.

The competencies studied and ranked provide information to curriculum planners for developing programs for preparing people for successful employment in some specific occupational clusters.

IDAHO

KOON, Bruce L. "A Study of the Teaching Potential for Women in the Idaho Vocational Agriculture Program." Master of Science, 1975, University of Idaho, Moscow.

Purpose. The purposes of this study were: (1) To determine the career opportunities for women seeking to enter the teaching field of vocational agriculture. (2) To inform school administrators that women were seeking careers in vocational agriculture. (3) To determine those instructional areas that high school administrators thought female vocational agriculture teachers should or should not be expected to teach.

Method: A review of literature was made of articles relating to women educators in vocational education. Further research was accomplished by surveying a woman vocational agriculture teacher and two women students enrolled in agricultural education at the university level. A questionnaire was then developed and mailed for response to Idaho high school principals, superintendents, and school board chairmen of high schools where vocational agriculture programs were taught. The data obtained from 129 of the 172 surveys were then summarized and analyzed.

Findings: Some of the major findings were:

1. The number of administrators responding to the survey who did not know that women were seeking jobs in vocational agriculture was eighty-seven. This number represented 67.5 percent of those who responded.
2. Fifty-seven of the 129 administrators were pleased that women were seeking jobs in vocational agriculture while forty-nine were indifferent, seven were displeased, and fourteen wrote comments other than those mentioned above.
3. The question was asked, "In your opinion, are there a reasonable number of opportunities for women vocational agriculture instructors in Idaho?" Fifty-six, or forty-six percent, of the respondents replied yes.
4. Opinions were asked of respondents relating to a woman's adequacy to teach certain instructional units in some major areas of vocational agriculture. The ratings available to respondents were: 1 - could teach adequately, 2 - may be questionable, and 3 - should not be asked to teach. There were three units rated in the forty percent range, one in the fifties, six in the sixties, two in the seventies, thirteen in the eighty percent range, twenty-three were rated in the nineties, and two were rated by 100 percent of the administrators as "could teach adequately."

ILLINOIS

BROWN, Ronald A. "Influences of an Agricultural Career Orientation Unit on the Career Development of Selected Junior High School Students." Ed.D. Thesis, 1974, University of Illinois, Urbana.

Purpose. To determine the effect of an agricultural career orientation unit on the knowledge of occupational information in agriculture and attitudes toward work of selected junior high school students.

Method. Participants in this study were selected for the following categories as intact classroom groups:

- 1) Career Orientation group
- 2) First-Year Agriculture group
- 3) Control group

A total of 342 students in these three groups completed two instruments on a pre-test and a post-test basis with the career orientation group undergoing a nine-week treatment period. The two instruments used were the Career Maturity Inventory, Attitude Scale developed by Crites in 1973 and the Agricultural Occupations Knowledge Test developed by the writer.

Data from these instruments were used to calculate residual gain scores which were analyzed by means of the analysis of variance and coefficient of correlation. The analysis of variance technique was used to determine the difference between the three treatment groups on the two instruments when students were grouped according to grade level, location of residence, farm experience, and sex. The coefficient of correlation technique was used to measure the relationship between the number of hours of career orientation activities and residual gain scores.

Findings and Conclusions. Based on the findings of the study, it was concluded that the career orientation unit was a valuable addition to the schools in which it was implemented. This conclusion was made based on findings which included the following:

1. Eighth-grade students in all groups gained significantly more on both instruments than did ninth-grade students. Yet, students in both grades showed increases.
2. When grouped according to sex, career orientation group students achieved significantly greater AOKT gains than did students in the other groups.
3. "Hands-on" type activities suggested by the unit created student interest and motivation.

GRANT, James and HEMP, Paul E. "A Study of the Development and Use of Citizens' Advisory Councils in Agricultural Occupations Programs in 114 Illinois High Schools." Staff Study, 1974, University of Illinois, Urbana.

Purpose. The major purpose of this study was to gather information concerning the use of citizens' advisory groups in occupational programs in Illinois high schools.

Method. A survey form was sent to a sample of 157 teachers of agricultural occupations employed in Illinois high schools. This sample was obtained by randomly selecting names from a list of all the experienced agriculture teachers in Illinois. The response rate was 72.5%.

Findings. Approximately 64% of the respondents indicated that they had an agriculture advisory council and/or a general vocational council. The major reasons given by teachers for not organizing and using advisory councils were lack of time, negative attitude of the school administrator, teacher not well enough established in the community, and school board does not favor the use of advisory groups.

The mean number of members on agriculture advisory councils was eight. Approximately 67% of the council members were farmers and the remaining members were employed in non-farm agricultural fields.

Some of the data from this study seems to suggest that the use of a general vocational advisory council may interfere with the conduct of a vigorous advisory group in agriculture. For example, the average size of agriculture advisory councils was 8.0 members for schools where no general vocational council was used and only 6.76 members in schools where a general council was used.

PURCELL, Arthur and HEMP, Paul E. "A Study of Adult Programs in Agriculture Conducted in Illinois High Schools, 1972-73." Staff Study, 1975, University of Illinois, Urbana.

Purpose. The purpose of this study was to determine the present status of adult education in agriculture in Illinois high schools and to identify some of the practices used in organizing and conducting adult education courses in agriculture.

Method. A listing of Illinois high schools which offered reimbursed courses in agriculture for adults in 1972-73 was obtained from the Division of Vocational and Technical Education in Springfield, Illinois. A two-page survey form was sent to 59 teachers to gather information concerning the practices and procedures used in organizing and conducting adult courses and the present status of the adult education program in Illinois.

Findings. The number of adult education courses in agriculture offered in Illinois high schools has declined from 485 courses in 1959-60 to 86 courses in 1972-73. The major reasons for this decline given by teachers who are currently teaching adult courses are low reimbursement from the state, inadequate pay for teachers, lack of teacher time and the increase in adult education offerings in Illinois community colleges.

Most of the adult courses offered in Illinois high schools are agricultural production courses with farm management listed as the most popular title. More than 90% of the teachers included in this study utilized course committees to plan and organize courses. Other practices used by more than 50% of the respondents were securing definite enrollment, visiting class members on the farm or on the job, using special teachers, using outside speakers, and publicizing courses in the local newspaper.

SIGLER, Leonard E. "An Analysis of Selected Mechanical Tasks Performed in the Agricultural Equipment Service Industry in Illinois." Ed.D. Thesis, 1975, University of Illinois, Urbana.

Purpose. The primary purpose of the study was to analyze tasks performed by mechanics employed in agricultural equipment dealerships in Illinois, to determine how frequently the tasks were performed, and the need for mechanics to be competent in the performance of these tasks prior to initial employment. One of the secondary purposes of the study was to determine if postsecondary agricultural mechanization program graduates perform the selected tasks at frequencies significantly different than mechanics who had not attended such a program, but had comparable on-the-job experience.

Method. The sample for the study consisted of the mechanics, service managers and owner-managers of fifty randomly selected agricultural equipment dealerships in Illinois. Four data collection instruments were developed to obtain data on frequency of tasks performance, the need for competence in tasks performance, and supplemental information. The t-test, the one-way analysis of variance, the Pearson Product-Moment Correlation Coefficient analysis, and Duncan's New Multiple Range Test were used to analyze the data.

Findings. In addition to analyzing the data to test the hypotheses, the data were summarized to determine mean frequency of performance and mean need for competence rating for each task, plus the percentage of respondents within each "frequency" of "need" scale category. The percentage of mechanics' responses in each frequency of performance category was used to establish high-, moderate-, and low-level worker activities. Of the 100 items, 12 were identified as high-level activities, while 47 were identified as low-level worker activities. The percentage of all respondents in each need for competence category was used to establish high-, moderate-, and low-level worker requirements and 5 items as low-level worker requirements. This procedure identified 23 of the items as high-level worker requirements and 5 items as low-level worker requirements.

The t-test between the mean frequency of performance values for community college graduates and mechanics who had not attended community college with comparable on-the-job experience identified 37 tasks with significantly different means for these two groups.

INDIANA

RICHARDSON, William B. "An Analysis of Factors Influencing the Earnings of Indiana High School Graduates." Staff Study, 1975, Purdue University, West Lafayette.

Purpose. The problem studies was the analysis of relationships between earnings of Indiana high school vocational graduates and selected variables hypothesized to affect those earnings. The objectives were:

1. Determine the earnings of a selected sample of individuals who have completed vocational programs in Indiana high schools.
2. Ascertain the effect that hypothesized socio-economic variables have on earnings.
3. Isolate the net effect that vocational training has on earnings of high school vocational graduates.

Method. A random sample of 25 schools that offered at least three vocational programs in 1972 and 1973 was selected. The graduates of these programs were identified and 1,000 were randomly selected. A mailed questionnaire was used to obtain the data.

Multiple Regression Analysis was used to statistically identify the relationships between earnings of the graduates and the variables hypothesized to affect those earnings. The dependent variable was the present earnings of the vocational graduates expressed in hourly earnings. A series of 18 independent variables were used in the analysis, such as: (1) Sex, (2) Completion of a vocational program, (3) Marital status, (4) Number of workers in place of employment, (5) High school cooperative training, (6) Migration, (7) Part-time employment while in school, etc.

Findings. The variables that had a significant relationship to earnings were: (1) Sex, (2) Marital status, (3) Year of graduation, (4) Highly liked present job, (5) Labor union membership, and (6) Length of time after graduation before a job was taken. The other variables were insignificant.

The major conclusions were: (1) Variables not directly associated with vocational training tend to have a greater influence on the earnings of vocational graduates, (2) The type of vocational program area completed by the graduate did not provide conclusive relationships with earnings.

RICHARDSON, William B. and McFADDEN, Joan R. "An Identification of Employment Patterns of Vocational Graduates of Indiana Secondary Schools." Staff Study, 1975, Purdue University, West Lafayette.

Purpose. The objectives of this study were: (1) To identify the first job taken by graduates of secondary vocational programs and to determine if it was related to the individual's vocational training. (2) To identify the type of employment six months after the completion of the vocational program and determine if it was related to the individual's vocational training. (3) To identify the job of the vocational graduates one year after graduation and determine if this employment was related to the individual's vocational training. (4) To identify the starting salary and patterns

of earnings of the vocational graduates. (5) To compare the salaries of those employed in other areas than that for which they were trained. (6) To determine the correlation between factors of employment patterns and vocational program type.

Method. A random sample of 25 Indiana schools was selected for the study. Eligible schools must have offered three vocational programs during the 1972-1973 school years. The random sample of 1000 graduates was selected and was stratified by vocational program types: (1) Agriculture, (2) Business Education, (3) Distributive Education, (4) Health Occupations, (5) Home Economics Education, and (6) Trade and Industrial Education. A mailed follow-up instrument was utilized to collect the data. A usable return rate of 68 percent was obtained. A non-respondent sample was examined.

Findings. The major findings of this study were: (1) Seventy-six percent of the graduates sought full-time employment upon completion of the vocational programs. (2) The majority of the graduates had held two full-time jobs or less. (3) The mean time it took the graduates to enter the labor market was 2.0 months. (4) Initially, 60 percent of the employed graduates were working in the occupation for which they were trained or a related occupation. (5) Eighty percent of the graduates expressed satisfaction with their vocational training. (6) The beginning wage earnings patterns of vocational graduates revealed a range of \$3.04 per hour to \$2.14 per hour, six months earnings were from \$3.46 per hour to \$2.18 per hour, one year earnings were from \$3.45 per hour to \$2.33 per hour. (7) A beginning earnings analysis did not reveal significant differences when job relatedness and mean salary levels are compared.

KANSAS

BOWIE, Kenneth W. "A Comparative Study of Vocational Interests of Boys and Girls Enrolled in Vocational Agriculture at Arkansas City and Central of Burden High Schools in 1973-74." Master's Report, 1974, Kansas State University, Manhattan.

Purpose. The study was designed to discover the vocational interests of boys and girls enrolled in the Arkansas City and Central of Burden High Schools. The author also hoped to discover what areas of the vocational agriculture curriculum might need to be changed as a result of the findings.

The objectives of this study are: 1) to determine the differences of vocational interests between boys and girls enrolled in Vocational Agriculture at Arkansas City and Central of Burden High Schools. 2) To discover how the vocational agriculture curriculum might be changed to better meet the interest of all students enrolled.

Method. The population consisted of 51 boys and 23 girls from Arkansas City and 52 boys and 26 girls from Central of Burden. Data were collected through a vocational interests survey which were given to those students enrolled in vocational agriculture at Arkansas City, and Central of Burden, High Schools. The survey consisted of 65 items which each student was asked to rank according to "low", "medium", or "high" interest in that area of vocational concern.

An average interest was calculated by assigning values of one, three, and five to responses of low, medium, and high, respectively, adding this total together and dividing by the number of students completing the survey. Average scores were calculated for: 1) Arkansas City girls, 2) Arkansas City boys, 3) Central girls, 4) Central boys, 5) total girls, and 6) total boys.

Findings. It was found girls were most interested in Animal Science and FFA activities (3.3), followed by horticulture (3.2), agribusiness management (2.9), crops and soils (2.7), and agriculture mechanics (2.6).

The boys were most interested in agriculture mechanics and animal science (3.3). In third place they indicated interest in agribusiness management (2.9), followed by crops and soils (2.7), FFA activities (2.6), and horticulture (2.1).

The results of this study appear to have implications for curriculum development at the junior and senior high levels.

The following conclusions were made as a result of the study:

1. Girls are most interested in studying animal science--particularly showing and fitting--and in FFA activities--in most every area.
3. Girls were least interested in agricultural mechanics skills.
4. Boys were most interested in agricultural mechanics and animal science. They were particularly interested in welding and livestock breeding and feeding.
5. Boys showed very little interest in horticulture.
6. The results of this study indicates that in the areas where boys and girls are both interested the degree of interest seems to correlate concerning materials offered within that area.
7. In areas where interests of boys and girls differed there was however a correlation of interests concerning subject matter within each curricular area indicating that semester courses would give students greater curriculum flexibility.

GOOS, William J. "A Study to Determine the Factors Which Influenced the Production Agriculture Experiences for Students With Limited Resources." Master's Report, 1974, Kansas State University, Manhattan.

Purpose. The purpose of this study was to determine the factors which influenced the production agriculture experiences of students with limited resources. To accomplish this goal, the writer prepared a research instrument to be completed by twenty selected Vocational Agriculture teachers in Kansas who reported having successful production agriculture experience programs.

Method. The questionnaire consisted of two pages of questions which were designed to measure information concerning the instructor, community, successful programs, and student limitations. Eighteen usable responses were returned and tabulated in percentages for analysis.

Findings. Forty-four percent of the experience programs involved school farm operations which included both the school property and the FFA coop rented facilities. Livestock programs involved 30 percent of the reported production agriculture experience programs.

Student limitations reflected 52.2 percent of the group having neither land nor capital with which to engage in a personally funded production agriculture work experience program.

A relationship of teacher tenure and teaching experience of ten years or less appeared to be the most frequent factor in successful production agriculture experience programs. Commensurate with this, it was noted that teachers with educational achievements of the M.S. degree represented the largest category of teachers engaged in successful production agriculture experience programs.

An analysis of this study indicated that the most significant factor in the school's providing production agriculture experience programs depend on the abilities of the teacher in acquiring the resources either from the school or from other sources.

THORNE, Henry F. "The Use of Independent Study in Kansas High School Production Agriculture Courses." Master's Report, 1974, Kansas State University, Manhattan.

Purpose. The purpose of this study was to determine a) to what extent independent study was being used in production agriculture courses in Kansas vocational agriculture programs, b) in what forms it was being used, c) reasons why it was not more widely used, and d) suggestions for the expansion of independent study.

Method. Information for this study was gathered from twenty-eight responses to a questionnaire mailed to thirty-nine randomly selected Kansas vocational agriculture instructors. The questionnaire containing thirty-seven items, included questions covering seven areas: a) personal and school background, b) starting an independent study program, c) types of independent study programs in use, d) methods of assisting students using independent study, e) opinions about independent study, f) why independent study is used more often in agriculture mechanics than production agriculture courses, and g) what assistance would be the greatest help towards increasing the use of independent study.

The responses to the questionnaires were tabulated into two groups: those instructors who used independent study and those who did not use independent study.

Findings. The findings indicated that 54% (15 of 28 responses) of the instructors responding to the survey used independent study. The most commonly used (11 of 15 responses) method of independent study was unscheduled time where students studied on their own for credit. This indicated that while more than half of the instructors used independent study, a small percentage of their students actually learned by this method of learning during regular classes.

It was found that the greatest reason for the limited use of independent study, according to 50% of the instructors who used, and 100% of the instructors that did not use independent study, was a lack of information concerning the methodology of independent study. This lack of information was indicated by another response which illustrated that 50% of the instructors who used independent study did not have assistance in setting up their own programs. This indicated that many of the independent study programs in use were not as high quality as they could have been had more information been available.

The findings also revealed several suggestions from the instructors for improving the use of independent study. Sixty-eight percent of all instructors responding to the question (17 of 25 responses) of what assistance they would like to have from the State Department of Education indicated they would like to have either programmed study guides, general guidelines or examples of independent study materials.

KENTUCKY

BINKLEY, Harold R. "Competencies Needed in Tobacco Production: Burley, Flue-Cured, and Dark Fired." Staff Study, University of Kentucky, Lexington.

Purpose. To determine the significant competencies to successfully produce and market tobacco.

Method. Each of the three varieties of tobacco were studied separately. A list of competencies were developed and validated for each of the three varieties by use of university extension tobacco specialists (Kentucky-South Carolina) and successful tobacco producers. A list of 45 growers (names and addresses) were secured for each of the three varieties. A survey instrument was mailed to each producer requesting an evaluation of each competency as to: 1) Essential, 2) Important, 3) Of Some Importance, 4) Not Important, or 5) Does Not Apply. A minimum of 30 responses from growers were secured for each variety.

Findings. Competencies identified and rating 2.5 or higher on a 5.0 scale by major production areas were:

<u>Area</u>	<u>Number of Competencies</u>
Planning to grow tobacco	5
Producing plants	14
Growing tobacco	14
Harvesting, housing and curing	8
Stripping and marketing	7

Competencies needed for successful tobacco production varied among the three varieties.

MICHIGAN

THUEMME, William L. "Agribusiness and Natural Resources Education in Michigan: Manpower Needs, Competencies Needed, and School Program Characteristics." Final Report - Staff Study, 1975, Michigan State University, East Lansing.

Purpose. To assess the agricultural manpower needs in Michigan in terms of present jobs available and jobs projected over the next five years, to identify and validate competencies needed for agricultural job entry upon graduation from high school, and to determine the degree of congruency and discrepancy between the characteristics of the present programs of vocational agriculture and the evidence of need based on manpower needs, competencies needed, and student interests and aspirations in agriculture.

Method. Included were: (1) a manpower needs assessment survey of three major occupational areas; (2) the identification and validation of several hundred competencies by analyses of job tasks in four occupational areas; and (3) an in-depth review of all ongoing programs of vocational agriculture in 1973-74, including an assessment of the agricultural interests and inspirations of 4,571 tenth graders in 12 schools. Manpower data were obtained from 144 farm operators, 100 nurserymen, and 50 farm equipment dealers by

telephonic interviews. Contingency tables were computed and tabular comparisons were made between the manpower, program review, and student interest variables.

Findings. Approximately 45,000 operators and workers were employed full-time on Michigan farms in 1974. Projections indicated that, over the next four years, twice as many farmers will be needed than are presently being prepared in vocational agriculture. During the same period, output from high school ornamental horticulture and farm mechanics programs will have to increase by 500 percent and 30 percent, respectively, per year, if supply is to catch up with the projected manpower needs in the two areas.

The number of students with interest in avocational and vocational instruction in agriculture was far in excess of the enrollment in vocational agriculture.

THUEMMEL, William L. "Agribusiness and Natural Resources Education in Michigan: Job Competencies Needed." Tabular Supplement, Staff Study, 1975, Michigan State University, East Lansing.

Purpose. To provide a tabular report on the competencies needed for agricultural job entry upon graduation from high school as identified and validated by analyses of job tasks in the project entitled "Agribusiness and Natural Resources Education in Michigan: Manpower Needs, Competencies Needed, and School Program Characteristics."

Method. A task analysis process was used to identify and validate job tasks in four major occupational areas: Agricultural Production, Environmental Horticulture, Farm Implement Repair, and the Biological-Technical Services in Agriculture. A total of 112 workers representing 21 different industries in the four occupational areas were involved in the validation of task items. The respondents indicated: (1) if the item represented an entry level skill or knowledge; and (2) the relative importance of each item for beginning workers. Job skills were "accepted" if 40 percent or more of the responses were in the affirmative. Job knowledges were evaluated in a similar manner, except the minimum acceptance level was lowered to 33 percent. Accepted job tasks or needed competencies within an occupational cluster which were common to all surveyed industries were identified as were those which were industry specific. The findings were reported in 100 tables.

Findings. Analyses of job tasks resulted in the identification and validation of several hundred competencies (skills and knowledges) as being needed by entry level workers for employment in occupations within the four clusters studied.

MINNESOTA

BJORHUS, Kenneth R. "Education Approach to a Country Park System." Master of Education, 1975, University of Minnesota, St. Paul.

Purpose. The purpose of this study was to relate the educational steps taken by the County Extension Agent to help his county develop a high quality and functional county park system. Further, the author attempted to relate the educational processes that were necessary to bring about a successful county park development program.

Method. This paper is a related history of the methods and procedures used by the Extension Office and the County Park Board to develop a county park system in Meeker County. To obtain data on how other counties were meeting their recreational needs, a questionnaire was sent to 10 surrounding counties. All 10 counties responded and are identified in this paper by letters from A to J.

Findings. The study found that people want outdoor recreation for themselves and their children. They want a place to enjoy outdoor recreation not too far from home. Financial and technical aid are available from the federal government and from the state to help counties plan for a second park development to meet this need. Studies by the Bureau of Outdoor Recreation (BOR) reveal that people want a great variety of outdoor activities in their parks. The objective is to provide the public opportunities for a wide range of settings for individuals and the family, for the young and the elderly. The questionnaire sent to 10 neighboring counties showed that all 10 counties were meeting the recreational needs of their counties by various degrees. This strongly indicated that in launching and expanding outdoor recreation, counties were responding to a clear public need, but that it was not a simple task to fulfill. The following conclusions were reached after completing this study: 1) Counties are recognizing their responsibilities in outdoor recreations and they are moving rapidly to meet them. At the same time this has created a need for education and leadership in this area. 2) Counties beginning a park system should take an objective look at their total county scene--at the existing parks, waters, and other resources. A study should be made of what type of outdoor recreation people want. Out of such a survey may emerge an understanding of the need for and the zeal for a long range comprehensive program to protect, acquire, and develop the county's outdoor recreation resources.

BUSCH, Dale R. "A Comparison Study of FFA Degree Recipients and Non-Recipients Among Vocational Agriculture Graduates of St. James, Minnesota, From 1956 Through 1974." Master of Science, 1975, University of Minnesota, St. Paul.

Purpose. To determine the differences between State Degree recipients and non-recipients of the same years as to present occupation, establishment in production agriculture, post high school education, number of jobs held, geographical location and membership in community organizations. Reactions to statements concerning the value of the State Degree were also secured.

Method. A questionnaire was sent to the 123 State Degree recipients from St. James, Minnesota, that graduated between 1956 and 1974. A random sample of four graduates that did not receive the State Degree in each of the same years was also sent questionnaires. Completed forms were received from 89 percent of the State Degree recipients and 64 percent of the non-degree recipients. Both the degree and non-degree graduates were studied in five year groupings of 1956-60, 1961-65, 1966-1970, and 1971-74. The data secured as then analyzed by total degree recipients, total non-degree and total vocational agriculture graduates.

Findings and Interpretations. Seventy-two percent of the State Degree recipients are employed in the field of agribusiness including 34 percent that are farming while 67 percent of the non-degree graduates are in agribusiness including 33 percent in a farming occupation. The State Degree farmers are significantly more established in production agriculture than are the non-degree farmers. State Degree graduates have held substantially fewer jobs since graduation. More college or vocational school training has been secured by the State Degree graduates. Eighty-three percent of the State Degree graduates have had some formal education compared to 49 percent for the non-degree graduates. Sixty-nine percent of the non-degree graduates live within 20 miles of St. James while the percentage is 61 for the State Degree graduates. State Degree graduates are significantly more active in their home community as measured by membership in community organizations. The responses to the statements by all the graduates indicated they felt the FFA State Degree was meaningful and the leadership and record keeping requirements were beneficial after graduation.

A continuation of the present FFA program and vocational agriculture curriculum in St. James was indicated by the study.

FAUSCH, Wesley. "A Definition and Review of Agricultural Mechanics at Post Secondary Institutions." Partial fulfillment for a Master of Education, 1974, University of Minnesota, St. Paul.

Purpose. To define technical education, determine the need for technical education and compare other educational programs to technical education in Agricultural Mechanics at Waseca.

Method. A review of current literature was used to define technical education. The literature also indicated a definite need for technical education. The Agricultural Mechanics programs

from four educational institutions were used to compare course structure and course hours. These institutions represented the two-year Area Vocational Technical Institute, the four year Bachelor of Science institution and the two-year Technical College.

Findings. Literature indicated a definite need for the competent technician as a link between the professional and the skilled worker. A comparison of educational institutions pointed out that the technical college has approximately a 50:50 ratio between classroom lecture hours and laboratory experience. This falls directly in between the A.V.T.I. and four year college. The technical college is providing a different and unique type of education and definitely has a role to fill in the educational system.

LEE, Bosco Wen-Ruey. "A Study on the Use of Audio-Visual Aids in Vocational Agriculture in Minnesota." Master of Arts, 1973, University of Minnesota, St. Paul.

Purpose. The purpose of this study was to determine from the Vocational Agriculture instructors in Minnesota what kind of materials and equipment was being used and their opinions about utilizing Audio-Visual materials and equipment in their teaching.

Method. A sample of 80 Vocational Agriculture instructors was chosen from 422 Vocational Agriculture high school instructors in the state of Minnesota for the school year of 1969-1970. The instrument was designed to collect information concerning: 1) what kind and how often the A-V materials were being used in various subject units; 2) the familiarity of the A-V equipment; 3) the use of library service and the adequacy of A-V materials in Vocational Agriculture; and 4) the reasons for using A-V materials and the opinions and problems in using A-V aids. 85% of the questionnaires were returned and descriptive statistics were used in analyzing the data.

Findings. 1) The most common and frequently used A-V materials in teaching Vocational Agriculture in Minnesota are: 16 mm. motion pictures; hand-out materials; filmstrips, charts and graphs; and overhead transparencies. 2) The Vocational Agriculture instructors have used more A-V materials in the course units of Livestock Production, Farm and Home Mechanics, General Agriculture, and Soil and Fertilizers than in other units. 3) The major purpose of using A-V materials is to supplement other methods of teaching and present additional information. 4) Generally the Vocational Agriculture instructors do not have problems in operating A-V equipment, and they are quite satisfied with the A-V materials they have used; however, they thought more A-V materials were needed in the areas of Farm Management and Economics, Horticulture and Landscaping. 5) They strongly agree that Audio-Visual education should be part of the Vocational Agriculture teacher's training program.

SOMMERS, Ronald D. "Initiating a Program of Semesterized Courses for High School Vocational Agriculture in the Faribault Public Schools." Master of Education, 1974, University of Minnesota, St. Paul.

Purpose. To review and study the course offerings and scheduling system presently in effect in the Faribault High School Vocational Agriculture Department and to determine the most effective means of changing full year courses in vocational agriculture to courses offered on a semester basis.

Method. A review of current literature revealed that advantages exist for semesterization of high school courses in vocational agriculture and that these advantages generally outweigh disadvantages encountered with semesterization. Course structure and description information from vocational agriculture departments in several Minnesota high schools was studied and compared.

Findings. Literature indicated that semesterization of Vocational Agriculture courses would allow students greater flexibility in course selection and could result in increased enrollment. A core of students would probably enroll in sequential courses in vocational agriculture which would lend continuity to supervised occupational experience programs and the F.F.A. Semesterized courses in vocational agriculture were developed by adapting units from the previous full-year courses to semester-length courses and incorporating features which have been termed successful by educators in other Minnesota high school vocational agriculture departments.

THOMAS, Ruth G. "Inquiry Into the Conceptualization and Development of a Method for Record-Keeping and Analysis of Equipment and Related Costs and Their Allocation to Vocational Education Programs." Master of Arts, 1975, University of Minnesota, St. Paul.

Purpose. To conceptualize and develop a system of allocating equipment costs to secondary public school vocational programs and to develop a procedure for collecting and recording instructional equipment cost data by program.

Method. The national and state public school accounting manuals and literature concerning conceptual and methodological aspects of educational cost accounting, cost variables and classification, cost measurement, program and accounting structures, depreciation, methods of cost allocation, equipment inventory systems, data-collection procedures and personnel-related considerations were reviewed to discover conceptual and practical problems related to allocating costs to educational programs to become aware of factors which should be considered when developing the system, and to become acquainted with cost allocation procedures already developed and their application to educational program cost accounting. A synthesis of the literature was prepared.

A critical analysis of the rationale and assumptions upon which methodologies were based was carried out. Based on the critical analysis, conclusions were reached as to which assumptions and rationale should be defined and applied in the development of the equipment records system and cost analysis procedures.

Findings and Interpretations. A system employing a micro-level approach to the on-going recording of educational equipment costs by educational program was developed. The system was designed to depreciate equipment and to allow determination of annual costs by educational program, by equipment item, and by course section for equipment acquisition, power consumption, maintenance and repair, interest on the capital investment, and insurance for donated and rented equipment used by one program only and that used jointly between two or more programs. The system provides for cost analysis procedures which allow cost comparisons and the determination of relationships and trends. It is urged that factors in addition to costs be considered in decision-making and that personnel considerations are important in the implementation of such a system. Guidelines for implementation are provided.

MISSISSIPPI

HAMILTON, J. Roland. "Improving Methods, Techniques, and Materials for Instruction of Teachers of Disadvantaged and Handicapped Students." Staff Study, 1975, Mississippi State University, Mississippi State.

Purpose. To increase the expertise of vocational teachers of disadvantaged and/or handicapped students in the areas of "Methods, Techniques, and Instructional Materials." A basic assumption for this project was that numerous teachers of disadvantaged/handicapped students needed to expand and improve their teaching competencies, especially in up-to-date methodology and materials. The "continuing" feature of the project - one full academic year - was set up for teachers to design and implement vocational plans and develop themselves and their facilities during the project.

Method. Thirty teachers of disadvantaged and/or handicapped students in the Mississippi Delta area were selected as project participants in conference between Mississippi State University and State Vo-Tech officials, Division of Special Vocational Programs. Selection was based on background and need of the individual teachers.

Three general sessions were planned as follows: (1) Orientation; (2) planning vocational training programs for the year; and (3) demonstrations by project participants, evaluation; and revision of long-range vocational training programs. Eight sessions were actually held.

In addition to instruction given at the general sessions, all participants were visited at their school, where individual instruction was also given. Participants were assigned the task of developing a vocational training program. A pretest and post-test of competency level were given participants.

Findings. Tests, general sessions, plus on-site visitation of each participant confirmed the original assumption that numerous teachers of disadvantaged/handicapped students in the Mississippi Delta area needed continuing, specialized instruction, particularly in the areas of methodology and instructional materials.

In general, schools needed more facilities, more effective facilities, and the teachers enrolled in the project needed continuing instruction on an individualized basis.

It was found that these "special" vocational teachers could develop, by their own skill and knowledge, effective vocational training programs, if given proper impetus. Of the thirty vocational teachers originally enrolled in the project, twenty-two completed all aspects of the project and did write training programs for the present and forthcoming academic years. The twenty-two who completed the project gave individual demonstrations involving "improved" methodology and materials and evaluated the project as well as themselves. It was concluded that a follow-up project should be conducted, dealing with more advanced methodology and materials for instruction of disadvantaged and handicapped students.

NEW YORK

BAIL, Joe P. and CUSHMAN, H. R. "Procedural Models for Conducting Adult Education Courses." Staff Study, 1975, Cornell University, Ithaca.

Purpose. The main objective of this study was to identify and delineate the three basic models used in teaching adult courses.

Method. Fifty-two programs of adult education were visited and the common characteristics of courses were recorded and analyzed. A preliminary draft of procedures and guidelines were field tested in eleven centers plus one summer school course. The characteristics of each model were then explicated in a slide series and in three separate publications.

Findings. Typical adult education courses fall under one or more of the following models: (a) Self-Fulfillment, (b) Business Management, and (c) Employee Training. Procedures and guidelines were developed and field tested for each model. The characteristics

of each model under the major headings were spelled out in the publications. These unique features included: Purpose, Clientele, Recruiting, Instructional Needs, Instructional Focus, Organization of Subject Matter, Special Features and Program Evaluation.

In addition, a self-help kit of materials to aid the prospective adult teacher was organized, assembled, and distributed for use with the models. A final publication, Seventeen Teaching Tools for Adult Educators, also resulted from the study.

MASSEY, Charles M. "Development of Super-8 Sound Instructional Films on Basic Arc Welding." M.P.S. Degree Project, 1974, Cornell University, Ithaca.

Purpose. The central purpose of this project was to design and produce a series of nine super-8 color training films that provide a sequential, close-up view of the basic electric arc welding instruction from the welder's viewpoint.

Method. Nine "shot" or take sheets were developed for each film on basic electric arc welding. The nine films were filmed and edited. Sound was added to produce a finished sound copy. The films were reviewed by several faculty members of the Agricultural Engineering Department at Cornell University. The final field test was made by showing sample films to teachers of Agricultural Mechanization. This viewing was used as an evaluation of the films and also as a strategy for introducing teachers to this new instructional product.

Result. The following super-8 color films were produced for instruction in electric arc welding:

1. Running a Stringer Bead in the Flat Position on Steel.
2. Running Weave Beads in the Flat Position on Steel.
3. Cutting, Piercing Holes, Chamfering, and Gorging.
4. Padding in the Flat Position on Steel.
5. Making a Horizontal Tee Weld.
6. Making a Flat Position Open Butt Weld.
7. Making a Flat Position Closed Butt Weld.
8. Butt Welding Steel Rod End to End.
9. Braze Welding Galvanized Iron Sheet Metal.

MILLER, Duane S. "Using Your Commercial Bank -- A Guide for High School Students." M.P.S. Degree, 1974, Cornell University, Ithaca.

Purpose. The primary purpose of this project was to develop a guide for high school students and consumers at large in effectively using the services of a commercial bank.

Method. A series of conferences were held with teachers

and bankers to determine the common misconceptions regarding commercial bank services. Outlines and examples of transactions were then prepared to provide a base for instructing students in the proper use of services available to them.

Findings. Preliminary data indicated that a majority of high school students were unacquainted with even the simplest of services at a commercial bank. Most had not ever written a check. Based on these findings, clear procedures for utilizing checking, savings, loan, and other special services were given. Examples of instruments used in all transactions were reproduced in the manual along with completed forms. A final chapter covers suggestions to teachers for using the materials in classroom settings.

TOM, Frederick K. D. and CUSHMAN, Harold R. "The Cornell Diagnostic Observation and Reporting System for Student Description of College Teaching." Staff Study, 1975, Cornell University, Ithaca.

Purpose. The main objective of the project was to develop a practical diagnostic observation and reporting system for student description of college teaching.

Method. Seven general teaching objectives, suitable for describing the important purposes of undergraduate courses, were synthesized from feedback provided by 120 instructors and incorporated into an Instructor Form, together with provisions for rating the importance of each in a given course.

Seventy-two low-inference teaching behaviors found by other researchers to be correlated with student achievement were pre-tested with 524 students to determine the clarity of the items and the competence of students to observe and report the behavior dealt with by each. The 45 surviving items and the seven general teaching objectives were brought together in a Student Form for collecting two types of data: (1) the degree to which selected teaching behaviors were exhibited by a given instructor and (2) the degree of student achievement as measured by student assessments of their own progress in achieving objectives considered important by the instructor. Using the Instructor Form and the Student Form, data were collected from 402 instructors and 12,792 students at ten colleges of agriculture in the Northeast.

Findings. Twenty-eight specific, low-inference, observable teaching behaviors correlated at the level of .48 or higher with student achievement on one or more of the general teaching objectives and were classified as effective at the college level.

Three main products were generated by the study: a revised Instructor Form, a revised Student Form, a stand-alone Computer

Printout which provides the instructor with feedback on the strengths and weaknesses of his teaching and enables him to prescribe appropriate remedies.

WILLIAMS, Edwin P. "Identifying and Meeting Teacher Needs for Instructional Materials in Selected Agricultural Teaching Areas." M.Sc. Thesis, 1975, Cornell University, Ithaca.

Purpose. The major purposes of this study were to develop procedural models for: (1) identifying instructional areas in farm production and management where instructional materials were most needed by teachers, and (2) meeting teachers' needs for instructional materials.

Method. A questionnaire was designed to obtain teacher responses regarding the adequacy of materials in identified areas of farm production and management. The questionnaire was sent to a random sample of teachers. A second objective of this study was to obtain teacher evaluations of existing instructional materials in areas of identified need, and then based upon these evaluations, to decide whether additional materials were needed. To accomplish this objective, packets of materials were sent to teachers who had indicated they lacked adequate materials to effectively teach "insect and disease control for corn production," or "marketing milk and dairy products." These areas were selected from the listing of areas where high priority needs existed, and their analysis was primarily intended to evaluate the model, rather than an end in themselves.

Findings. A priority listing of the areas where needs existed was compiled from the survey results. Only those areas with a significance level of .10 or less were deemed necessary of receiving special attention, in terms of making additional efforts to meet the identified needs. The areas of farm production and management included in the priority listing were: (1) insect and disease control for corn production; (2) insect and disease control in hay; (3) storing corn silage; (4) agricultural legislation; (5) marketing milk and dairy products; (6) opportunities in agricultural business; (7) pasture management; (8) storing hay crop silage; (9) determining the cropping program; (10) milk quality control and judging; (11) planning a soil conservation program; (12) farm law; (13) harvesting hay crop silage; (14) dairy herd health; (15) storing corn for grain.

The survey results also provided information regarding the frequency of areas taught. This information is useful to instructional materials agencies by providing a basis for making decisions on materials selection and distribution.

Another aspect of the instructional materials needs survey was to find out what variables, if any, were related to the number of areas taught, or the adequacy of materials. No significant correlations were found.

OHIO

BROWN, Joseph P. "The Role of the College Work-Study Student as Perceived by County Extension Agents and College Work-Study Students in Ohio." M.Sc. Degree, 1975, The Ohio State University, Columbus.

Purpose. The purpose of this study was to describe and compare the role of the college work-study student as perceived by Ohio County Extension Agents and college work-study students as they performed these roles in the Ohio County Extension Service programs. To determine if age, sex, grade in college, years of 4-H club membership, years of Junior Leadership membership, and years of experience as a college work-study student, and sex, title and years of extension service experience of County Extension Agents are related to the roles college work-study students and County Extension Agents perceived that college work-study students can perform.

Method. Sixty-one roles were identified. These were classified in ten categories. College work study students employed during the summer of 1974 and their supervising County Extension Agents were mailed questionnaires. They were asked to indicate the extent to which each role was appropriate for the work-study student to perform.

Findings. County Extension Agents and college work-study students perceived forty of the described roles similar and appropriate to be performed by college work-study students. Role categories of 4-H camp and 4-H training were identified as most appropriate groups of roles to be performed by college work-study students. When County Extension Agents and college work-study students disagreed on roles or tasks to be performed by college work-study students, college work-study students generally saw these roles or tasks more appropriate for them to perform than did County Extension Agents. Male and female County Extension Agents and college work-study students perceived all role categories the same. County Extension Agents disagreed on roles, based on years of experience and title or position. College work-study students agreed on all role categories based on their age, grade in college, years of experience and previous 4-H club membership. College work-study students disagreed on roles based on previous Junior Leadership experience.

BROOKS, Henry M. "Perceived Training Needs of Extension Specialists at 1890 Land-Grant Institutions and Tuskegee Institute." Ph.D. Dissertation, 1975, The Ohio State University, Columbus.

Purpose. The major purpose of this study was to identify and describe the perceived training needs of Extension specialists

at 1890 Land-Grant Institutions and Tuskegee Institute. This study also described the training needs of specialists as identified by their administrators.

Method. The population for this study consisted of the 100 state level specialists and 15 administrators at fourteen 1890 Land-Grant Institutions and Tuskegee Institute; responses to a mailed questionnaire were received from 81 specialists and 14 administrators.

Findings.

1. Specialists as a total group perceived that the most training needed was in the area of evaluating and reporting Extension programs.
2. Specialists in different Extension divisions (4-H, Agriculture, Home Economics, Community Resource Development) perceived the amount of training needed similarly in all areas except specific technical areas.
3. Specialists and administrators with different pre-service training perceived the training needs of specialists similarly.
4. Younger specialists with the least amount of tenure in Extension and tenure in present position perceived a greater need for training than older specialists with more tenure in Extension and tenure in present position.
5. Older administrators with more tenure in present position perceived that specialists needed more training than younger administrators with limited tenure in present position.
6. Specialists' perception of training needed in Extension philosophy decreased as age increased.
7. Specialists' perception of training needed in evaluating and reporting Extension programs increased as tenure in present position increased.
8. Specialists with Bachelor of Science degrees perceived a greater need for training in evaluating and reporting Extension programs than specialists with Master's degrees and Doctorate degrees.
9. Administrators perceived that specialists needed more training than specialists perceived themselves.
10. Specialists perceived that the type of technical training needed most were in areas other than their own specialty.

CRAWFORD, Richard L. "Evaluation of Instructional Materials to be Used in Advising the FFA." Master's Thesis, 1975, The Ohio State University, Columbus.

Purpose. The primary purpose of this study was to develop and evaluate an instructional package to be used to instruct teachers of vocational agriculture to advise a selected segment of the FFA program. These instructional materials were designed to be used for both pre-service and in-service education of teachers. They are part of an instructional package entitled "How to Plan and Conduct an Effective FFA Chapter Banquet."

Method. A two-part instructional package consisting of a booklet and a series of film segments was developed and evaluated. The evaluation considered cognitive and affective learning by the sample population. The population were students in pre-service classes in agricultural education at The Ohio State University during Winter Quarter 1975. A nonequivalent control group design was employed with one group using the instructional package and the other group learning about the subject from an instructor supplied with the objectives and a list of references.

Findings. The major findings of the study were as follows:

1. Students receiving instruction on how to plan and conduct a Chapter FFA banquet using the instructional package did not score significantly higher on the post-test than students taught by conventional methods.
2. Students receiving instruction using the instructional package did not have a significantly higher attitude toward type of instruction received than students receiving instruction through conventional methods.
3. Student attitude toward the instructional package was generally favorable.
4. Students generally had a favorable attitude toward FFA banquet as an FFA activity.
5. Students' attitude toward FFA banquets did not change because of the instruction received.

ERPELDING, Lawrence H., Jr. "Status of Post-Secondary Education in Agriculture, Agribusiness, Natural Resources and Environmental Occupations, 1975." Staff Study, 1975, The Ohio State University, Columbus.

Purpose. To determine the status of post-secondary programs in agriculture, agribusiness, natural resources and environmental occupations in the United States and Puerto Rico in terms of

teachers, programs and students. The data collected were to constitute a tool administrators could utilize in making programmatic decisions.

Method. Department chairmen in post-secondary institutions offering one and two year programs in agriculture, agribusiness, natural resources and environmental occupations were surveyed to determine the number of teachers employed, types of curricula offered, and student enrollment. Data were assembled showing the number of full and part-time teachers, the types and numbers of curricula, students enrolled in each program, extent of adult education offerings, and number of curriculum related student organizations.

Findings. The 1975 data showed record high numbers of programs offered and students enrolled in agriculture, agribusiness, natural resources and environmental occupations in post-secondary education of less than baccalaureate degree. Programs numbered 1,334 in 1975 which represented an addition of 198 compared to the previous year. Student enrollment was reported as 54,428; an increase of 8,343 or 18% from 1974.

Department chairmen stated 1,575 full-time faculty were employed in 1975. This number represented an increase of 119 fully-employed instructional personnel when contrasted to the 1974 report. Part-time faculty employment grew 711 in 1974 to 1,118 in 1975 which represented a 43% expansion.

Of the 441 institutions offering less than baccalaureate post-secondary education in agriculture, agribusiness, natural resources and environmental occupations, 36% provided curriculum-based student organizations. Adult education programs were offered in 32% of the 441 institutions.

GLAZIER, G. Donald, Jr. "Attitudes of Selected Clientele Toward Vocational Agriculture Programs of Two County Agricultural Schools in Massachusetts." Ph.D. Dissertation, 1975, The Ohio State University, Columbus.

Purpose. The major purpose of the study was to describe the attitudes of parents, teachers, and employers in Essex and Norfolk Counties in Massachusetts, toward the vocational agriculture program offered by their respective county agriculture school.

Method. Data were collected by mail questionnaire. Complete replies were received from seventy-nine employers and seventy parents who were randomly selected in Essex County along with sixty-nine of the eighty-three teachers employed at Essex Agricultural and Technical Institute. In Norfolk County complete replies were received from sixty-six employers and sixty-nine parents who were

randomly selected along with twenty-seven of the thirty-four teachers employed at Norfolk County Agricultural High School. A modified Likert attitude scale, developed to assess attitudes regarding vocational agriculture, was field tested in Massachusetts and then subjected to item analysis and further refinement before being employed in the study. An introductory questionnaire was designed to collect pertinent data concerning selected characteristics of the respondents. Statistical techniques used in analyzing data included the t-test, one-way analysis of variance, point-biserial correlation, and Kendall Tau correlation.

Findings. All three groups studied in each county had generally favorable attitudes toward the vocational agriculture programs carried on at their respective county school. Parents in both counties tend to have a more favorable attitude than either employers or teachers. Teachers in both counties tend to have a more favorable attitude as their age and years of employment increased.

Other findings of significance in Essex County were as follows: post-secondary academic and vocational agriculture teachers of agriculture subjects tend to exhibit a more favorable attitude than vocational agriculture teachers of academic subjects; teachers tended to have more favorable attitude toward vocational agriculture if they had been enrolled in vocational agriculture or vocational education in high school, if they had a child enrolled in vocational education, if they had production agriculture work experience, and as their annual income increased.

Other findings of significance in Norfolk County were as follows: parents tend to exhibit a more favorable attitude toward vocational agriculture if they had used the services offered by the extension service, as their years of agricultural work experience and age decreased; employers tend to have a more favorable attitude as the population of their home town increased; vocational agriculture teachers of agriculture and academic subjects tend to have a more favorable attitude than extension agents; and male teachers tend to have a more favorable attitude than female teachers.

GROVES, Robert H. "Factors Influencing Family Migration From Appalachia." Ph.D. Dissertation, 1975, The Ohio State University, Columbus.

Purpose. This study compared farm brothers who stayed in the rural Appalachian area of Ohio with their urban brother siblings who migrated to metropolitan areas in Ohio.

Method. Personal interviews were conducted with forty-four rural and forty-four urban brothers in 1974. Rural brothers were located in eight randomly selected counties in the Appalachian

region of Ohio. Urban siblings lived in or adjacent to an Ohio city of 100,000 or higher population.

Findings.

1. Rural brothers stayed in the home area because they, "liked the community," or had an "opportunity to take over a farm."

2. Urban brothers migrated because of, "little opportunity for employment," or "financial opportunities were lacking."

3. There was a high positive correlation between rural and urban brothers in their rankings of ten societal values.

4. The decision to stay in the rural area or migrate was primarily a personal decision on the part of the respondent.

5. Rural brothers showed a higher frequency of visits in the past year with parents than did urban brothers.

6. Rural brothers and urban brothers differed in personal characteristics such as major occupation, number of residences since birth, length of time at present location, perceives satisfaction with life when compared to all siblings, annual income, major source of income, and length of time they expect to remain in their present community.

7. There was no difference in characteristics of age, age of spouses, family life stage, family size, number of persons in their household, education, sibling order, overall involvement in social institutions, marital status, social status, perceived respect in the community, and consideration of leaving or returning to home area.

McCRACKEN, J. David and COOKE, Frederick C. "A Comparative Analysis of Tasks Essential to Successful Performance in Three Veterinarian Lay Occupations." Staff Study, 1975, The Ohio State University, Columbus.

Purpose. The major purpose of this occupational survey was to identify the skills which were performed and essential for success in each of three veterinarian lay occupations.

Method. An initial task inventory was developed. Tasks were grouped into functional duty areas and reviewed for brevity, clarity, and consistency. The list was validated through review by instructors in veterinary assistant programs and veterinarians. A questionnaire was developed to obtain information from incumbents concerning whether each task was performed. If a task was performed the occupation responsible for the task was to be identified. A rating of importance to successful performance in the occupation was also

obtained. Forty usable responses were obtained from a sample of 100 veterinary practices.

Findings. Twenty percent or more of the animal health assistants performed tasks in 15 duty areas. Twenty percent or more of the animal hospital receptionists performed tasks in eight duty areas. Twenty percent or more of the animal health technicians performed tasks in 18 duty areas. Duty areas performed by all three occupations were: recording information, dispensing medicine and supplies, administering medication, assisting in restraining animals, and safety precautions.

The number of duty areas with a mean importance rating of 2.50 or higher were eight for the animal health assistant, two for the animal hospital receptionist, and 15 for the animal health technician.

It was recommended that ratings for each of the 268 tasks be examined to determine curriculum priorities.

McCRACKEN, J. David; NEWCOMB, L. H.; and MOORE, Gary E. "Development and Evaluation of a Computerized Data Bank of Inservice Education Needs of Vocational Agriculture Teachers." Staff Study, 1974, The Ohio State University, Columbus.

Purpose. The major purpose of this effort was the development of a system for collecting, analyzing, and utilizing data for graduate-level inservice education course offerings for vocational agriculture teachers of Ohio.

Method. A questionnaire was designed to collect demographic data and the course work desired by teachers. Courses in seven departments were listed. Teachers were encouraged to write in additional courses. Teachers completed the questionnaire during district and state vocational agriculture conferences and the data were entered for computer analysis.

Findings. Demographic data which were collected included: vocational agriculture district, taxonomy (agricultural specialization), degrees possessed, graduate school enrollment status, interest in taking additional course work, interest in working on a Master's Degree, interest in a doctoral program, teaching certificate possessed, institution granting degrees, and hours needed to renew teaching certificate.

Any of the variables placed in the data bank can be cross-tabulated with any other variable. Another useful output from the procedure has included listings of teachers on certain variables. In planning inservice course offerings, names of teachers in each district who desired certain courses were listed. Other listings included one of teachers interested in a doctoral program and one of persons interested in, but who were not yet admitted to, graduate work.

McKENZIE, Joan R. "Reactions and Responses to the Cooperative Extension Home Economics Programs on WHIZ-TV." Master's Degree, 1975, The Ohio State University, Columbus.

Purpose. The study described and compared audience characteristics with degree of helpfulness, interest in and involvement with home economics subject matter programs presented over WHIZ-TV, Zanesville, Ohio. A randomly selected research population received a mail questionnaire.

Method. The audience was characterized as young, non-employed, urban, middle income homemaker involved with mass media approaches.

Findings. The audience expressed a high degree of viewing intensity and helpfulness from the Extension Home Economics subject matter presented through the medium of television.

MYERS, Donald K. "An Evaluation of the Introduction of an Agronomic Innovation Among Ohio Farmers." Ph.D. Dissertation, 1975, The Ohio State University, Columbus.

Purpose. This study was designed to identify several pertinent characteristics of Ohio farmers who were willing to demonstrate no-tillage pasture renovation and the characteristics of their non-demonstrator neighbors. Selected characteristics of the no-tillage pasture demonstrators and the non-demonstrator neighbors were compared and information was obtained concerning the acceptance of this agronomic innovation.

Method. Personal interviews with 20 demonstrators and 39 non-demonstrator neighbors were conducted during March, 1975.

Findings.

1. Early demonstrators of an innovative idea involving pasture, farmed more acres of pasture than neighbors.
2. The demonstrators of an agronomic innovation participated in more educational events conducted by the Cooperative Extension Service, as well as other area and state educational events. These demonstrators traveled more widely, visiting the Ohio Agricultural Research and Development Center and its outlying Research Branches and the Farm Science Review much more frequently than the average producer. The demonstrators talked to University or Research personnel more frequently.
3. The primary source of new ideas of the demonstrator group was the Cooperative Extension Service. This source was also the most useful source of new ideas in farming.

Non-demonstrators relied upon sources of information other than the Cooperative Extension Service for new ideas in farming. Magazines served as a primary source.

4. Demonstrators of an agronomic innovation tended to be younger than the average producers and the trend was for these demonstrators to possess slightly more formal education than the non-demonstrator.

5. The trend was for demonstrators of an agronomic innovation to participate in more farm oriented groups and organizations.

6. Demonstrators of a new agricultural idea tended to read more agricultural publications than the average non-demonstrator.

NIPAH, Sarah C. "Factors Leading to the Development of a Successful Agriculturally Related Youth Program in Ghana." Master's Thesis, 1975, The Ohio State University, Columbus.

Purpose. The purpose of the study was to identify factors which have contributed to the success of agriculturally related youth programs in the United States of America, that might be applicable in the development of 4-H type programs in Ghana, and to recommend some program planning procedures for factors found to be feasible in Ghana.

Method. To generate primary data, thirty-six factors grouped under seven categories of general, organization, leadership, participation, recognition, sponsorship and teaching method were obtained through literature. With these factors, mail questionnaires were developed and responded by selected groups of respondents. The respondents consisted of both Americans and Ghanaians who have knowledge of Ghanaian conditions. The analysis utilized both percentages and chi squares. The percentages were used to classify the factors into groups of relative applicability. The chi square was to test the difference between the respondent groups and the way they responded to the factors. The analysis indicated relationship between the respondent groups and the way they responded to the factors for eight out of the thirty-six factors.

Findings. Twenty-nine of the factors were classified as applicable and seven as modifiable to the Ghanaian situation. No factor was classified as not applicable due to local (Ghanaian) conditions; i.e., culture, customs, etc.

Generally, Thanians rated the factors as more directly applicable than Americans; this seemed to reflect the differences in their background, environment and extent of the familiarity of the Ghanaian situation.

A high percentage of respondent groups rated direct application for participation, organization, teaching methods and some of the general factors so highly that program developers should consider them highly as some of their priorities in their program planning activities. The percentage ratings were very close with some of the factors and therefore need further research for clarity.

SATURNINO, M. Ocampo, Jr. "The Occupational Knowledge of Twelfth-Grade Vocational Agriculture Students." Ph.D. Dissertation, 1975, The Ohio State University, Columbus.

Purpose. The major purposes of the study were: to determine the occupational and educational plans of twelfth-grade vocational agriculture students; to investigate the relationship of selected variables to students' occupational and educational plans; and to assess students' knowledge about the occupations chosen.

Method. The 360 students in the study were enrolled in agribusiness, agricultural mechanics, horticulture, and farm management programs who attended area vocational centers and local high schools. Twenty-eight vocational agriculture teachers provided data for the study also. Questionnaires were personally administered to groups of students and teachers.

Findings. Sixty-two percent of the students named an occupational choice; 38 percent did not. For students indicating an occupational choice, 37 percent named non-farm occupations directly related to the instructional program in which they were enrolled; 29 percent named non-agricultural occupations; 25 percent named production agricultural occupations; and 9 percent named non-farm occupations not directly related to the program. Twenty-one percent planned to pursue post-secondary education. Two-thirds of the students got an occupational knowledge score that is less than 75 percent of the maximum score for the occupational knowledge test.

Instructional program, place of residence, sex, and type of school attended were found to have a significant relationship with the occupational plans of the students.

SIMERAL, Kenneth D. "The Rapid Adjustment Farm Program Influence on Other Farms in the Community." Master's Thesis, 1974, The Ohio State University, Columbus.

Purpose. To determine if the Ohio Extension Service's Rapid Adjustment Farm Program is effective as a means of diffusing technology and management practices to other farmers in the community and what characteristics of Rapid Adjustment Farms aid in this diffusion. The Rapid Adjustments Farms are large scale demonstration farms with the Ohio Cooperative Extension Service and other supporting agencies working intensively with an individual farm family to improve the management qualities of the individual farmer; it was the purpose of this study to determine if these management techniques and practices were being looked at and adopted by other farmers in the community.

Method. The data utilized in this study were collected by interviewing thirty randomly selected dairy farmers in each of three Ohio counties where dairy Rapid Adjustment Farms were in existence.

The stage in the adoption process of respondents was measured for 17 selected practices.

Findings. The Rapid Adjustment Farm Program is effective in helping diffusion to occur if there is a great deal of inner-action between the Rapid Adjustment Farmer and other farmers in the community. Friends of the Rapid Adjustment Farmers are more likely to view the practices carried out on the Rapid Adjustment Farm as being practical on their own farms. Farmers who view the Rapid Adjustment Farmer as an opinion leader are more inclined to have received ideas from the program than farmers who do not view him as an opinion leader. Those farmers who participate in groups with the Rapid Adjustment Farmer get more ideas from the program and are more inclined to view those practices carried out there as practical than those farmers who are not in groups with the Rapid Adjustment Farmer. These findings of the need for inneraction between the Rapid Adjustment Farmer and other farmers in the community need to be incorporated in selecting future Rapid Adjustment Farmers.

STARLING, John T. "Farm Business Analysis Report of Programs Conducted by Teachers of Vocational Agriculture." Staff Study, 1974, The Ohio State University, Columbus.

Purpose. To provide teachers of agricultural production courses with some averages, relative to certain efficiency factors, which they can use in planning occupational experience programs in teaching classes in agricultural production.

Method. Ohio teachers who were conducting Farm Business Planning and Analysis programs submitted 415 farm business summaries for computer analysis. Averages of several selected measures of performance from the farm business analyses were used to secure the data for this study.

Findings. The major findings of this study were as follows:

1. The average capital investment per farm was \$168,822.00.
2. The investment in land decreased \$12,000 between 1973 and 1974.
3. The average gross income per farm was \$82,800.
4. The average unpaid operator and family labor income for 1974 was \$12,496.
5. The average overhead cost for 1974 was \$25,296, an increase of \$6,726 from 1973.
6. The average variable cost for 1974 was \$35,466 which represented an increase of \$8,000 from 1973.

7. The return to operator and family labor and management income per hour averaged \$6.03.
8. The investment on machinery and equipment increased \$5,141 between 1973 and 1974.
9. In beef feeding operations there was a reduction of \$35.54 per hour from 1973 to 1974 in Return to Unpaid Operator. This can be contributed to the increased feed cost which nearly doubled between 1973 and 1974.
10. In the past 3 years the number of pigs weaned per litter has decreased.
11. In swine feeding operations there was a return to Unpaid Operator and Family Labor, Mgt. and Profit per Hour of minus \$6.00.
12. The Return to Unpaid Operator and Family Labor, Management and Profit per Hour in Sheep Breeding was minus \$3.10.

WOTOWIEC, Peter J. "Students' and Parents' Ratings of the Tract Garden Program in the Cleveland Public Schools." Ph.D. Dissertation, 1975, The Ohio State University, Columbus.

Purpose. The major purpose of this study was to describe the Tract Garden Program in the Cleveland Public Schools and to determine the perceptions of students and parents concerning the extent to which the objectives of the program were being accomplished. Also investigated were the perceptions of students and parents concerning tract garden operations and the relationships of students' and parents' perceptions with selected personal and family characteristics.

Method. The target population was all students, and their parents, enrolled in the Cleveland Public Schools full-season Tract Garden Program during the 1974 season. Selection of the sample involved the identification of tract garden groups to which students were assigned at each garden according to grade level. Three categories of tract garden groups were established.

A sample of 15 percent of the tract groups was obtained by using a table of random numbers to select six tract groups each in the first two categories and three tract groups in the junior and senior high school category. The 15 tract groups of 404 students constituted the student sample. The parent sample was the parents or guardians of these students. An opinionnaire was administered during a gardening session to the students. Students who completed opinionnaires were given parent opinionnaire forms to take home. Data analysis techniques included frequency distributions, measures of relationship between variables, and the t-test and one-way analysis of variance for comparing groups.

Findings. The findings revealed that students and parents believed, in general, that the objectives of the Tract Garden Program in the Cleveland Public Schools were being accomplished; however, parents tended to rate the degree of accomplishment higher than did the students. Both groups of respondents indicated that the garden program was of much value in developing character, promoting physical health, teaching conservation, providing practical skills and knowledge in gardening, developing appropriate work habits, providing for career exploration, and providing fresh vegetables for family consumption. Both groups of respondents were of the opinion that the Tract Garden Program was not of much value in promoting practical application of academic skills and knowledge.

Both students and parents felt that the operation of the Tract Garden Program in the Cleveland Public Schools was satisfactory.

YOUNG, Richard E. and CUNNINGHAM, Clarence J. "Area Agent Staffing Compared with County-Only Staffing in the Cooperative Extension Service in the United States." Staff Study, 1974, The Ohio State University, Columbus.

Purpose. The purpose of this three-year project was to conduct a study on the relative advantages and disadvantages of area agent staffing compared with traditional staffing by county units.

Three major studies by Moore (1973), Warner (1973) and Pittman (1974) contributed to this purpose. Moore identified the status of staffing in the U. S. by surveying state Extension directors and program leaders. Warner's study analyzed organizational aspects of staffing patterns; his respondents were Extension professionals in seven states. A clientele appraisal was conducted by Pittman in three states, each state representing one of the major staffing patterns.

Findings. Area agent staffing in Extension may result in professional workers being more satisfied with their jobs and feeling more meaningfully involved in the organizational hierarchy. The role conflict that might be expected when a new role is introduced may not occur.

Of the two major area staffing patterns in use in the United States, the better rated was the pattern that included three separate levels of workers--county, area, and state. The lower rated pattern involved workers at two levels only--multi-county and state.

The traditional county-only pattern was not rated poorly. In several ways it was rated by clientele as better than either area staffing pattern. County-only staffing pattern clientele were more satisfied with programming processes, with speed of response to requests for information and with the helpfulness of the information they received from Extension.

RHODE ISLAND

CARLOW, Wayne. "A Personal Learning Experience Teaching Home Horticulture to Adults Through a College Continuing Education Division." Master of Arts, 1975, University of Rhode Island, Kingston.

Purpose. This practicum experience was undertaken by this author for one full semester to increase his knowledge of the subject area, to increase his self-confidence in teaching adults, and to increase his ability to develop a course outline suitable for implementing a course to teach adults.

Method. The author met his objective by: (1) searching out and reviewing various informational materials related to horticulture, (2) developing an annotated bibliography with intent of updating it in the future, (3) visiting and recording responses of interviews with various resource people working within the area of horticulture, (4) developing and implementing a course outline for teaching adults with intent of revising a course in Extension for one full semester throughout which self-evaluations and some group evaluations were made in reference to the author's self-confidence.

Findings. Through completing the practicum experience, the author discovered: that he had attained a better understanding and ability to develop a course outline for an adult class; that he had increased his knowledge and awareness in many areas of horticulture; and, finally, he had throughout the course attained a much higher level of self-confidence in teaching before the group.

HUTCHINGS, Shirley E. "Learning Experiences Gained in the Development of a 4-H Record Keeping Training Program for Adult Volunteer Leaders." Master of Arts, 1974, University of Rhode Island, Kingston.

Purpose. The purpose of this practicum was to increase the author's knowledge and skills in educational methods and techniques, in organizing and planning a 4-H Leader Training Program in 4-H Record Keeping. Four areas were explored: (1) assessing needs, (2) planning and organization, (3) implementation techniques and (4) evaluation of the total effectiveness of the 4-H Record Keeping Training Program.

Method. To gain experience in assessing needs, the author used (1) small group discussions, (2) interviews, (3) a questionnaire, (4) a review of current literature, and (5) informal discussions with the 4-H Staff. In the planning and organization of the 4-H Record Keeping Training Program, the author (1) established a listing of priority needs, (2) reviewed literature

from other states, (3) prepared a basic outline of the training program and (4) prepared the final Training Program consisting of a 4-H Leaders' Guide in 4-H Record Keeping, a State Summary Form, and revised Project Record Sheets. To gain experience in implementing the Training Program, the author (1) prepared promotional information and (2) conducted a workshop. The training program was then utilized by three 4-H Clubs. In evaluating the total effectiveness of the Training Program, the author utilized (1) personal contact and (2) actual written evaluations of the record books using the Training Program.

Findings. As a result of the methods of assessing needs and of planning and organization, a complete Training Program on 4-H Record Keeping was prepared for Adult 4-H volunteer leaders. The total Training Program reflected the needs expressed by the 4-H Community. The Training Program included a Leaders' Guide, "Learning Through 4-H Records," a two page State Summary Form, and revised and new 4-H Project Sheets. The author gained experience in assessing needs, planning and organization, implementation and evaluation techniques which can be applied to other program development experiences.

MARRON, Thomas J. "Initiating and Establishing Outdoor Education in Grades Five and Six." Master of Arts, 1974, University of Rhode Island, Kingston.

Purpose. The purposes of this field practicum were to learn methods to 1) develop administrative support for an Outdoor Education Program in Grades Five and Six, 2) develop interest and involvement in Outdoor Education among teachers in Grades Five and Six, 3) develop interest and involvement among high school students to assist an Outdoor Education effort in an elementary school, 4) develop interest and involvement among teachers in Grades Five and Six to plan and develop their Outdoor Classroom, and 5) develop interest and involvement among teachers to develop their own Outdoor Education units.

Method. The objectives of this practicum were achieved by 1) contacting school administrators, teachers, and State Department of Education personnel, 2) meeting with teachers in Grades Five and Six to offer and provide assistance, help develop plans, and evaluate efforts made, 3) involving the teachers in successful Outdoor Education experiences, 4) providing the teachers with encouragement, advice, and materials, 5) providing the teachers with training sessions, 6) providing teachers with the assistance of high school students, 7) requesting and encouraging high school students to volunteer their assistance to the elementary school program, 8) providing high school students with meaningful opportunities to assist the elementary school program, 9) making a program of assistance in Outdoor Education part of the high school program, 10) meeting with teachers to share ideas to plan and develop their

Outdoor Classroom, 11) touring Outdoor Classrooms with the teachers, 12) assisting the teachers to develop their own Outdoor Classroom in any other way, 13) providing teachers with a "model" Outdoor Education Unit, 14) providing teachers with resource materials, 15) meeting with the teachers to critique and modify their own "Units," 16) obtaining a salary increment for the "Unit" work completed by the teachers.

Findings. Through this field practicum, the author has increased his knowledge and understanding of the methods, the process, the effort, and the dynamics of initiating and establishing Outdoor Education in Grades Five and Six. The author has developed skills and abilities valuable to his work in the field of Outdoor Education. The field practicum has resulted in valuable experiences with students, teachers, administrators, and the out-of-doors.

TENNESSEE

MANER, Buford A., Jr. "A Survey of the Fall Quarter 1967 Through the Summer Quarter 1972 Graduates of The University of Tennessee College of Agriculture." Ed.D. Dissertation, University of Tennessee, Knoxville.

Purpose. The primary purposes of the study were to analyze the factors which influenced students to enroll at institutions of higher learning, factors that influenced students in the selection of their major areas of studies, and the factors affecting the satisfaction of their completed programs.

Method. The study included 661 individuals comprising Bachelor of Science graduates of the University of Tennessee, College of Agriculture, during the 1967-68 through the 1971-72 academic years, inclusive. All graduates were included in the study population and 404 or approximately 62 percent of the total participated in the study. All data were collected by mailed responses from a questionnaire developed by a jury of specialists.

Findings. Analysis and interpretation of data indicated the following findings: (1) Approximately 76 percent of the graduates had a farm or rural background. (2) Thirty-six percent of the graduates were transfer students from junior or community colleges and other universities. (3) Most graduates participated in farm related youth organizations during high school. (4) Over 50 percent of the graduates had been enrolled in high school vocational agriculture and approximately 40 percent had completed the maximum four years. (5) Approximately 25 percent of the graduates did not utilize information relative to curricular offerings before enrollment. Graduates that did utilize this information related that the vocational agriculture teacher was most often of greatest assistance in providing information. (6) Parental influence far exceeded

other persons in making the decision to enroll in college and the selection of a major. (7) Approximately 76 percent of the graduates had chosen their major area of study before meeting their first college class. (8) Approximately 77 percent of the graduates entered in occupations related to their college major. (9) Over 40 percent of the graduates had changed jobs at least one time since graduation. (10) Approximately 61 percent of the graduates would repeat the same course of study if they were entering college again. (11) The most frequently mentioned suggestions given for improving student recruitment were increased person to person contact, beginning earlier in high school, and placing more emphasis on nonrural high school students. (12) The opinions given for improvement of guidance and counseling of undergraduate students included: that mandatory scheduled sessions with advisors should be held; that advisors post a time schedule of availability; and utilization of assistance from upperclassmen, graduate students, agricultural clubs, and fraternities.

NORRIS, Roy K. "Selected Professional Competencies for Secondary Teachers of Agriculture." Ed.D. Dissertation, 1975, University of Tennessee, Knoxville.

Purpose. The purposes of the study were to determine from a previously established listing of competencies which ones were considered essential by vocational agriculture teachers, which ones should be developed during preservice or inservice education, which of the competencies should be developed in a specialized or integrated course, and which of the essential competencies did beginning and experienced teachers significantly disagree.

Method. The population of the study was 2,980 secondary vocational agriculture teachers from eight states, or two from each of the four major regions of the United States. The sample consisted of 277 beginning teachers and an equal number of experienced teachers selected at random from the four regions. The findings were based upon a 44 percent return of the 554 teachers. The teachers were asked to respond to a questionnaire developed from a review of literature and competency studies which had been completed during the last twenty years. The questionnaire contained 109 competencies which were categorized into instructional, management, and coordination areas. The chi-square test was used to test for significant differences.

Findings. The major findings of the study were: (1) All competencies which had been identified previously as essential were not rated essential by the teachers. Only 55 of the 109 competencies were rated essential by at least a 70 percent consensus. (2) The teachers did not all agree on the frequency of use of the competencies but agreed more on the use of the instructional competencies with 61 percent agreeing on daily or weekly use. (3) The development of the instructional competencies at the preservice level received a consensus of 55 percent of the respondent but there was not that much agreement between the other categories. (4) The

specialist course was favored by 66 percent of the respondents for developing the competencies rated essential. (5) Fifty-five competencies were rated essential by beginning and experienced teachers and they only disagreed significantly 29 times out of a possible 220 choices. (6) When this data were considered by regions, beginning and experienced teachers disagreed least in the Pacific (California/Colorado) Region (1.4 percent of the time), next was the Central (Illinois/Ohio) Region (3.9 percent), third was the Southern (Florida/Virginia) Region (5.3 percent), and most disagreement was in the North Atlantic (New York/Pennsylvania) Region (17.9 percent).

TODD, John D. "Follow-up Study of Credit Workshop Conducted in Middle Tennessee, Summer 1974." Staff Study, 1975, University of Tennessee, Knoxville.

Purpose. The purposes of the study were to determine the change in the number of hours of instruction in agricultural credit as the result of vocational agriculture teachers participating in the workshop, and their use of instructional materials prepared specifically for teaching credit.

Method. The population of the study consisted of 18 teachers who participated in a five-day credit workshop. At the beginning of the workshop, the teachers responded to a pretest requesting the number of hours of instruction in agricultural credit which each gave during the preceding school year (1973-74). During the workshop they received instructional materials and were given instruction relative to teaching agricultural credit. Near the end of the school year following the workshop (1974-75), the same teachers were asked to respond to a post-test requesting the number of hours of instruction in credit given during the year. They also indicated their use of the credit manual and teacher's guide which were distributed at the time they participated in the workshop.

Findings. The following statements summarize the study: (1) The 18 teachers increased the number of hours of instruction in agricultural credit from 207 during the school year preceding the workshop to 351 the following year. (2) Approximately all of the teachers offered instruction in agricultural credit during both school years. (3) The average hours of instruction in agricultural credit increased over the preceding school year for each grade level during the school year that followed the workshop. (4) Approximately 50 percent of the instruction in agricultural credit for both years included in the study was given during Grade 12. (5) The average hours of instruction in agricultural credit for all grade levels was increased from 12.93 during 1973-74 to 20.64 for 1974-75. (6) Twelve teachers reported using the "Credit in Agriculture" manual during the 1974-75 school year and 10 reported using the "Teacher's Guide."

TEXAS

HUDSON, William E.; HOLCOMB, John W.; BROWN, Herman D.; and CHRISTIANSEN, James E. "Employment Opportunities and Training Needs in Agribusiness; Identification of Competencies Needed for Entry and Advancement in the Cotton and Horse Industries." Staff Study, 1975, Texas A & M University, College Station.

Purpose. The purpose of this study was to determine from industry the competencies necessary for entry and advancement in horse and cotton production.

Method. A competency list for horse production and cotton production was prepared by the research team with assistance from specialists in horse and cotton production at Texas A & M University. Leaders in the horse and cotton production industries in Texas were nominated, by area supervisors of agricultural education, to serve on either an advisory or validating committee for each area. Four committee meetings (an advisory and validating committee for each area) were held on the Texas A & M University campus to revise, refine, and validate the competency lists before the national validation proceeded. Leading members of the horse and cotton production industries in each of the second through tenth nationally ranked states were identified by the respective state directors of agricultural education. These leaders so identified were surveyed by mailed questionnaires received from forty-six members of the horse production industry and forty-three members of the cotton production industry.

Findings. One hundred sixty-six specific competencies for horse production and one hundred fifty-nine specific competencies for cotton production were found to be important in terms of employability at the entry and first advancement levels of horse and cotton production. The specific competencies for each area were rank ordered from the specific competencies considered most important to those deemed the least important.

WEBB, Earl S.; KRONKE, Larry K.; and DARCY, Chester L. "Follow-up of Graduates of the Pre-Employment Laboratory Program in Farm Machinery Service and Repair." Staff Study, 1975, Texas A & M University, College Station.

Purpose. The purpose of the research was to determine (1) employment status of former students, (2) the retrospective perceptions of former students as to how well the high school program prepared them to be mechanics, (3) how the program could be improved as seen by former students and (4) to obtain an evaluation of former students as viewed by their employers.

Method. Data were obtained by use of questionnaires sent to former students and to their employers. Names and addresses of former students were obtained from teachers of vocational agriculture. The names and addresses of employers were obtained from the former students.

Findings. The names and addresses of 201 former students who were thought to be employed as mechanics were furnished for the study by teachers of vocational agriculture. Of these 201 persons, 77 or 38.3 per cent responded to a questionnaire. Thirty-two were working as mechanics, 27 had worked as mechanics but had terminated their employment as such. Eighteen had never been employed as mechanics. In general, former students thought the program had prepared them well for employment. They suggested, however, that more training was needed in the areas of hydraulic and diesel systems. Other suggestions included better qualified instructors and screening of students to include only those who wanted to learn the mechanics trade. Employers were, in general, complimentary of graduates but agreed with the former students that more training was needed in hydraulic and diesel systems. They also suggested more attention be given to keeping work area clean, receptiveness to supervision, and to personal cleanliness while on the job.

UTAH

ALARCON, Jorge Matienzo. "A Strategy for Implementing Improved Sheep Production Practices in the Altiplano of Bolivia." M. Sc. Thesis, Utah State University, Logan.

Purpose. To develop a strategy and teaching aids to achieve goals in applying new methods and modern technology that will implement improved sheep production practices in the Altiplano of Bolivia.

Method. The author observed improvement practices at the Cedar City Experimental Station that could be used for implementing sheep production practices in the Altiplano of Bolivia.

Findings. The author drew the following conclusions from his study: (1) that there is a need for an outlined plan or "strategy" for sheep production practices in the Altiplano of Bolivia; (2) that if the steps of this "strategy" are adopted, answers to improved sheep and forage production should follow; (3) there is a definite need to assist campesinos in all the steps outlined so that the objectives might be achieved.

WILDE, Murray F. "An Evaluation of the Consistency with Which Extension Workers in Utah Interpret Data Elements for Reporting into the State Extension Management Information System." M. Sc. Thesis, Utah State University, Logan.

Purpose. To determine the degree of consistency of Utah Extension personnel in interpreting and reporting Extension activities to the State Extension Management Information System. To determine areas of greatest inconsistency in reporting and to determine if there is need for additional in-service training in the interpretation of the data elements to improve the validity of the data provided.

Method. Three selected groups of Extension workers were asked to complete a SEMIS activity report on a set of hypothetical Extension activities. Twenty-six County Agents reported on a set of hypothetical activities typical of the work of a general County Agent. Thirty-six Home Economists reported on a set of typical activities of Extension Home Economists. Thirty-three State and Area Specialists reported on a set of hypothetical activities typical of the work done by Extension Specialists.

Actual daily activity reports of Utah Extension workers who participated in selected common activities were examined to determine the consistency with which they reported specific activities.

Findings. The County Agents index of agreement for their 19 activities ranged from 53 to 97 per cent but averaged 84 per cent. Home economists ranged from 62 to 98 per cent with an average index of agreement of 74 per cent. The specialists' average index of agreement was 79 per cent.

It may be generalized from this study that Utah Extension workers are more consistent in reporting purposes and methods than they are in reporting tasks, subjects, and audience types.

Inconsistency in reporting was generally in proportion to the number of subjects that were being combined into one activity to be reported. Some examples of these were staff meetings, conferences, and combination of office and telephone calls that were together for reporting. The most consistent reported activities were those that were simple, very routine, and often reported activities; for example--making farm visits for accomplishment of a single objective.

Since it was found that tasks, subjects, and audience type were reported with the least consistency, concentrated efforts in improving the reporting of these categories would strengthen the State Extension Management Information System.

VIRGINIA

LEE, Jasper S. "A Survey of Procedures Followed by High School Teachers in Planning Programs of Agricultural Education in Virginia." Staff Study, 1975, Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. To survey the procedures followed by high school teachers in planning local programs of instruction in agriculture and to determine the perceived needs of teachers in the area of program planning.

Method. The survey was conducted by mailing a questionnaire to all teachers who were heads of high school agricultural education departments in the State of Virginia. There were 214 head teachers in the State in 1974-75. (Useable questionnaires were returned by 112 persons.) Statistical analysis included the determination of frequencies, percentages, means, mean rankings, and rankings.

Findings. The most important item in determining which option, e.g., agricultural production, ornamental horticulture, and agricultural mechanics, to include in a local agricultural education program was "suggested to administration by agriculture teachers." No effort was made to determine how the teacher arrived at what to suggest. However, it was found that community surveys were still widely used. The most important item in determining what to include in the instructional program for in-school classes was that of reviewing curriculum guides made available to agriculture teachers. Only about half (50.8 per cent) of the respondents indicated that their daily instructional programs were specified in written program plans. The teachers felt that, above all else, they needed more instructional materials and curriculum guides to aid them in planning programs of agricultural education. Some of the areas which the respondents felt should be included in program planning materials were career education, fundamental information on how to plan programs, community study forms, forms for outlining daily instruction, forms for outlining FFA activities, and forms for developing local program objectives.

WISCONSIN

JENSEN, Richard A. "A Professional Function-Task-Competency Approach to Curriculum Development for Wisconsin Post-Secondary Agricultural Instructors." Ph.D. Thesis, 1974, University of Wisconsin, Madison.

Purpose. The purpose of the study was threefold: that of identification of the professional functions, tasks, and competencies deemed important for Wisconsin post-secondary agricultural instructors; determination of the level of competence instructors perceive they possess; and determination as to whether the competencies should be developed in their preservice or inservice programs.

Method. The data collected was a part of a longitudinal study. A questionnaire was developed identifying the functions, tasks, and competencies. Data was then collected from the post-

secondary instructors in production and agribusiness in Wisconsin. Four null hypotheses were tested using chi square, F-ratio, and Pearson product-moment correlations.

Findings. The finds revealed the respondent groups had unique characteristics and educational needs. Only four of the eighty-nine competencies were significantly different between the two groups' opinions relating to when the training should take place.

Two correlations of the 198 were found to be statistically significant concerning the inservice and preservice dependent variables. The relationship between teaching experience and the professional competencies included in the Student Vocational-Technical Organization and the Coordination functions were significant.

It was recommended that competencies included in the following seven functions should be stressed in inservice programs of post-secondary agriculture instructors: Curriculum Planning, Development and Evaluation; Instruction-Evaluation; Management; Guidance and Counseling; School-Community Relations; Student Organizations; and Advisory Committees.

STUDIES IN PROGRESS, 1975-76

Colorado

Sabol, Joe. "Competencies Needed for Successful Employment in Sheep Production." Dissertation, Ph.D. Colorado State University, Fort Collins.

Illinois

Daniels, James. "Attitudes of Selected High School Educators Toward Enrolling Physically Handicapped Students in Regular Shop Courses." Dissertation, Ed.D. University of Illinois, Urbana.

Reynolds, Carl. "A Comparison of Agricultural Education Students and Students in Other Agriculture Curricula and Factors Related to Their Curriculum Choice." Dissertation, Ed.D. University of Illinois, Urbana.

Indiana

Clanin, Edgar E. and Gottschalk, Daniel. "An Analysis of the Employment of Patterns of Purdue Agricultural Education Graduates from 1950-1973." Staff Study, Purdue University, West Lafayette.

Copes, Marvin and Richardson, Bill. "The Predictability of Career Choices of High School Seniors." Dissertation, Ph.D. Purdue University, West Lafayette.

Hamilton, W. H. "Agricultural Education Apprentice Program." Staff Study, Purdue University, West Lafayette.

Hamilton, W. H. "Preparation of Training Materials on Agricultural Safety and Health." Staff Study, Purdue University, West Lafayette.

Howell, David and Hamilton, W. H. "Identification of the Occupational Competencies Needed in the Area of Agricultural Chemicals." Staff Study, Purdue University, West Lafayette.

Richardson, Bill and Howell, David. "Development and Field-Testing of Audio-Visual Material for Thirteen Units of Leadership Instruction." Staff Study, Purdue University, West Lafayette.

Richardson, Bill and Kline. "Development of a Generalizable Evaluation Model for Vocational Teacher Education." Staff Study, Purdue University, West Lafayette.

Iowa

- Archer, Thomas M. "Philosophy and Practice: Iowa Area School Agricultural Programs." Dissertation, Ph.D. Iowa State University, Ames.
- Clausen, Otto C. "Evaluation of Agricultural Education Curriculum by Graduates." Master's Thesis. Iowa State University, Ames.
- Gliem, Joseph A. "Effectiveness of a Student Reference in Teaching Safety to High School Vocational Agriculture Students." Dissertation, Ph.D. Iowa State University, Ames.
- Kaas, Duane A. "Experimental Evaluation of Alternative Methods of Teaching Plant Material Identification." Dissertation, Ph.D. Iowa State University, Ames.
- Leising, James G. "Assessment of Philosophic Constructs and Purposes of Iowa Vocational Agriculture Programs." Dissertation, Ph.D. Iowa State University, Ames.
- Lindahl, Thomas J. "Employment Qualifications of Post Secondary Teachers of Agriculture in Iowa Area Schools." Dissertation, Ph.D. Iowa State University, Ames.
- Silletto, Thomas A. "Farm Accident Survey for 1975 and Implications for Educational Programs in Iowa." Dissertation, Ph.D. Iowa State University, Ames.

Kentucky

- Iverson, Maynard. "Competencies Required in Small Fruit Production." Staff Study, University of Kentucky, Lexington.
- Tulloch, Rodney, W. "Competencies Required for Vegetable Production." Staff Study, University of Kentucky, Lexington.

Mississippi

- Brown, Ronald A. "Career Orientation for High School Student Leaders in Agricultural Occupations Programs." Staff Study, Mississippi State University, Mississippi State.
- Carter, John K. "A Study of Vocational and Pre-Vocational Educators' Perceived Competence Level in the Operation and Use of Audio-Visual Media in Teaching." Master's Thesis, Mississippi State University, Mississippi State.
- Johnson, Rufus Wayne. "An Analysis of Mississippi Secondary Guidance Counselors Awareness Concerning Career Opportunities in Agricultural Education." Master's Thesis, Mississippi State University, Mississippi State.

Nebraska

Dillon, Roy D. "Identification of Applied Biological Science Interests of 5th, 8th, and 11th Grade Students in Nebraska." Staff Study, University of Nebraska, Lincoln.

Dillon, Roy D. "Employment Opportunities and Competency Needs of Agricultural Processing Workers in Lancaster County, Nebraska." Staff Study, University of Nebraska, Lincoln.

Douglass, Richard L. and Horner, James T. "Approaches to Occupational Education and Teacher Preparation for Rural Development." Staff Study, Department of Agricultural Education, University of Nebraska, Lincoln.

Douglass, Richard L. and Horner, James T. "An Evaluation of Mediated Career Information for Modifying Aspirations, Knowledge and Attitudes Toward the World of Work." Staff Study, University of Nebraska, Lincoln.

Douglass, Richard L., Bringelson, Richard A., and Horner, James T. "An Evaluation of the Effectiveness of Mediated Agricultural Mechanics Materials." Staff Study, University of Nebraska, Lincoln.

New York

Dolbeck, Keith A. "A Student Resource Guide on Beekeeping." M.P.S. Degree Project, Cornell University, Ithaca.

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